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By EDWARD ANTHONY MAZIARZ

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THE JOURNAL OF PHILOSOPHY

VERIFIABILITY AND PHENOMENALISM[1]

IN this paper I wish to propose a refutation of one of the arguments which have been offered in support of one of the possible answers to one of the many problems usually called "*the* problem of perception."

Within this large cluster of problems, the specific problem in which I am interested is that of the relation between sense-data and material things. Of the many answers which have been suggested to this problem—that sense-data are parts of the surfaces of material things, that sense-data are caused by material things, and so on—the particular answer which I shall consider is that given by *phenomenalism*. This is the answer that material things just *are* groups or collections or classes of sense-data, and that therefore the relation between sense-data and material things must of necessity be simply that of class membership. It is answered, that is, that the sense-data in question are simply members of that class of sense-data which *is* the material thing. And the *argument* that I want to refute is this one: that the phenomenalistic answer just stated is strictly entailed by the so-called "verifiability theory" of meaning. I call this argument "the semantic argument for phenomenalism."

Such a tightly circumscribed objective may seem very modest indeed. But I suspect that in fact it is not modest at all. For it appears to me that this argument has been, for at least the last twenty years, almost the only one used by phenomenalists in support of their position. The sort of "empirical" arguments given, for example, by Locke, Berkeley, and Hume—the argument from synthetic incompatibility of data, the argument from causal dependence, and so on—are now regarded as superfluous, since the semantic argument is believed to be by itself sufficient to establish the truth of phenomenalism.

Unfortunately (as it seems to me), a great many philosophers have allowed themselves to be convinced that the verifiability theory of meaning does in fact entail phenomenalism. And since, to a large group of these philosophers, phenomenalism seems obviously false, the conclusion has been drawn, though usually regretfully,

[1] The following paper is a slightly expanded version of one read before the Western Division of the American Philosophical Association meeting at Columbus, Ohio, on April 29, 1949.

that the verifiability theory must also be false. And to many of these philosophers, giving up the verifiability theory is equivalent to giving up empiricism altogether. For example, Russell has consistently held, since at least 1914, that if we reject phenomenalism, as he does, then we *must* also reject empiricism, however undesirable this step may appear to us.

Let me state the argument in question. According to the verifiability theory, all cognitively meaningful statements of fact refer to those present and possible sense-data which would be accepted as confirming or disconfirming the statements. That is, what these statements *mean* is that such and such sense-data either now exist or would exist under specified conditions.[2] From this it follows, so the phenomenalist's argument goes, that all that can possibly be asserted by a material-thing sentence—say the sentence "The sun is shining"—is that certain sense-data either do, or would, exist. And hence, a material thing—say the sun, about which our statement said that it was shining—can *be* only this class of actual and possible sense-data.

The great scope and force that this argument would have, if it were valid, arises from the fact that it can be used to show that it is analytically impossible for anyone to deny the truth of phenomenalism; to show, that is, that it is analytically impossible to assert the existence of anything but sense-data. For suppose an anti-phenomenalistic philosopher to assert that there are transcendent, unobservable material things which are the causes of sense-data but which are not identical with sense-data. This statement also, if it is empirically meaningful, must, according to the verifiability theory, be simply an assertion that certain sense-data do, or would, exist. And from this it follows, the phenomenalist holds, that the so-called "transcendent, unobservable material things," the existence of which was being asserted, turn out in the end to be just still further collections of actual and possible sense-data, and not actually "transcendent" at all.

This is the argument that I want to refute.

In stating this as an *argument*, proceeding from the premise that material-thing sentences are about sense-data (from the verifiability theory, that is) to the phenomenalistic conclusion that ma-

[2] I shall not, in this paper, be discussing the theory that material-thing *sentences* are translatable into sense-datum *sentences* (sometimes called the "Principle of Reduction," or, by Stebbing, the "Principle of the Final Translatability of Sentences"). One should, I believe, distinguish between the verifiability theory, which asserts only that every empirical statement means the occurrence of certain sense-data, and the further theory that this meaning is *statable* in certain other *sentences*. I shall be discussing only the former of these theories.

terial things *are* classes of sense-data, I am, I fear, crediting the phenomenalists with more clarity about the point at issue than they actually manifest in their books. Hence, the question may be raised as to whether the argument is one that has ever been given by a phenomenalist. And, indeed, no phenomenalist with whom I am acquainted does set down the argument in the explicit form given above. The reason for this is that he does not really distinguish the two assertions which form, respectively, the premise and the conclusion of the argument. What a phenomenalist will *say* is that material things are "logical constructs" out of sense-data. And in this single statement, he includes, in an unanalyzed sort of way, both the premise and the conclusion of the argument.

The argument which he will offer in support of his statement that material things are logical constructs out of sense-data is an argument which really does prove the first of the assertions above—the assertion that material-thing sentences are about sense-data; but which does not prove the second—that material things *are* classes of sense-data. He will argue this way: that unless material things were logical constructs out of sense-data, it would not be possible to confirm the existence of material things by the observation of sense-data. Now what this argument really does show—conclusively, I think—is that unless material-thing sentences asserted that certain sense-data are, or would be, observed (that is, unless material-thing sentences were *about* sense-data), then the observation of those data would be irrelevant to the truth of what the sentences *asserted*—and hence irrelevant to the truth of the sentences. That is, roughly, it proves that material-thing sentences are about sense-data.

From this I think we may infer that a part, at least, of what the phenomenalist has in mind, in a confused sort of way, when he says that material things are logical constructs out of sense-data, is that material-thing sentences are about sense-data.

But this contention—that material-thing sentences are about sense-data—is just the verifiability theory itself. When it appears concealed in the form "Material things are logical constructs out of sense-data," it *appears* to be an assertion about material things and to say something about their relation to sense-data; just as the statement "Patchwork quilts are constructs of patches" is about quilts, and is asserting something about the relation of quilts to their component parts. But when the assertion is made explicit, as it is above, it is clearly *not* an assertion about the nature of material things or their relation to sense-data. It is rather an assertion about the *semantic* relation between material-thing *sentences*, on the one hand, and sense-data, the referents of these sentences, on the other hand. And if this were all that the phenomenalist were

asserting, his position would be indistinguishable from the verifiability theory of meaning.

But it is tolerably clear that when the phenomenalist says that material things are logical constructs out of sense-data, he believes himself to be asserting more than just that material-thing sentences are empirically meaningful, that they are, that is, about sense-data. He believes himself to be in some sense asserting also that there are no transcendent material things; or, alternatively, that material things *are* just classes of sense-data. And he proceeds as if, in arguing for the verifiability theory, he had shown also, and by the same argument, that material things are just classes of sense-data.

Now although these two assertions are not distinguished by phenomenalists, I think we can see that they are in fact distinct. For the latter statement, unlike the former one, *is* about material things. It does not, to be sure, assert that the physical parts of material things are sense-data, in the sense in which the physical parts of a patchwork quilt are patches. For, according to the phenomenalist, material things are classes, and classes, being abstract entities, do not have physical parts. But it *does* say (1) that material things are not concrete individuals, but are abstract entities, namely, classes; and (2) that the members of these classes are sense-data. It is, therefore, a statement of the same sort as the statement that the human race is a class of persons.

Another, and perhaps still clearer way, of expressing what the phenomenalist means by his assertion that material things *are* classes of sense-data is this: he means that material-thing words are the names of classes of sense-data. Material-thing words, according to him, are the general names of, or, better still, *denote*, collections of sense-data. Thus the phenomenalist would claim that when I say "The table is brown," what I mean is that the actual or obtainable sense-datum *brown* is one of the members of that class of sense-data which the word "table" denotes or applies to.

The semantic argument, as I have formulated it, recognizes that these two assertions, usually not distinguished by the phenomenalist, are in fact distinct. What is asserted by that argument is that the former assertion entails the latter. Let us now ask: *Does* the premise of the argument—that material-thing sentences are about sense-data—entail the supposed phenomenalistic conclusion—that material-thing words denote groups of sense-data? In asking this, we are simply asking in a clearer form the original question: *Does* the verifiability theory entail phenomenalism?

The answer to this question turns, as it seems to me, upon whether or not we are able to distinguish two different senses of the term "about"—and of the correlative terms "refers to" and

"means"—such that, in one of these senses, all material-thing sentences are about sense-data and about sense-data only, while at the same time being, in the other sense of the term "about," not about sense-data at all, but about material things—things which *may* be quite distinct from sense-data, and not directly observable at all.

I think that we not only *can* distinguish two such senses of the term "about" (or, if you will, two such *modes of meaning*), but that in fact we always *have* distinguished them. The two senses are those which C. I. Lewis has called "intension" and "denotation." Let us apply this distinction to the question we have asked.

In the mode of intension, all material-thing sentences are about sense-data, and about sense-data only. But to say this is to say only that there is a sense of the term "asserts" in which all material-thing sentences assert those occurrences which would usually be called the "evidence" for their truth, and that these occurrences are always sense-data. This is what is claimed by the verifiability theory, and it is all that is claimed by that theory.

But this certainly does not make it impossible that there should be *another* sense of the term "about" in which material-thing sentences are not about sense-data, but about material things not identical with any group of sense-data. And in fact I think it is clear that there is this other sense: the sense of *denotes*, or *applies to*. It seems to me clear that, although the proposition "The sun is shining" certainly *intends* sense-data, and intends *only* sense-data, none the less the word "sun" may perfectly well denote, or name, or apply to, something which is *not* a sense-datum or a group of sense-data. Let us take two examples, the first one very simple.

Suppose I assert that Mt. Washington is in New Hampshire. And suppose, as is the case, that I would accept as partial evidence of this that I found, when I looked into my atlas, the *words* "Mt. Washington is in New Hampshire." According to the verifiability theory, then, the existence of these words in the atlas was part of what I intended when I made my statement; that is, in the mode of intension, their existence was part of what I *meant*. But surely it does not follow from this that the *words* "Mt. Washington is in New Hampshire" are part of what is *denoted* by the term "Mt. Washington." For surely everything that is denoted by the term "Mt. Washington" is in New Hampshire; whereas these words are in a book on my bookshelf in Evanston.

Another example. Suppose I assert that the sun is shining. And suppose, as is the case, that I would accept as partial evidence of this the occurrence of certain sense-data which I should describe as "hearing you say that the sun is shining." Now surely no one would claim that this auditory sense-datum of mine, this *noise*, is

part of what is denoted by the term "sun," or that this noise is one of the things to which the term "sun" *applies*. Surely no one would claim, that is, that the sun *is*, in part, certain noises that I hear.

And yet this is exactly what phenomenalists imply by what they say. To illustrate this let us consider an example that is often given by phenomenalists themselves. Suppose, as is the case, that, in addition to the above noise, I would accept also as evidence that the sun is shining certain sense-data which I should describe as "visual appearances of the sun from various places and under various conditions" (those sense-data, that is, which Russell calls "aspects"). Now what the phenomenalist holds is that it follows from this—from the fact that the evidence that the sun is shining consists of appearances of the sun, and that therefore, according to the verifiability theory of meaning, the statement that the sun is shining must intend these appearances—that the sun *is* the sum total of these appearances. But is it not clear that this case is exactly the same, so far as the present question goes, as the preceding ones? If it does not follow, in the earlier examples, that the term "Mt. Washington" applies to certain words in Evanston, and that the term "sun" denotes certain noises, then neither does it follow, in this case, that the term "sun" applies to those sense-data which we should call "visual appearances of the sun."

Even if phenomenalism were in fact true, and the term "sun" *did* denote a certain class of actual and possible sense-data, surely these would not be the *same* sense-data as are intended by the statement that the sun is shining. For the latter class—the class of data intended by the statement "The sun is shining"—would include the noise mentioned above, the noise which I called "hearing you say that the sun is shining"; whereas the former class—the class of data *denoted* by the term "sun"—would not include any noises.

This shows conclusively, I think, that from the assertion that all statements containing the term "sun" *intend* sense-data and only sense-data it can not be validly inferred that the term "sun" *denotes* only groups of sense-data. It shows, that is, that the fact that material-thing sentences *intend* sense-data does not imply that material things *are* classes of sense-data. And since these two statements are just clarified formulations of the premise and the conclusion of the semantic argument, that argument is therefore invalid.

We may apply the distinction to the typically anti-phenomenalistic statement mentioned at the beginning of the paper: *viz.*, to the statement that there are transcendent, unobservable material things which are the causes of sense-data but which are not identical with sense-data. It is the denial of this statement (and others like

it) which defines "phenomenalism." Does the falsehood of this statement follow from the verifiability theory?

The verifiability theory interprets this statement as asserting, in the sense of intending, that certain sense-data would exist under certain conditions. But, if the distinction which I have been urging is legitimate, then it does not follow from this that the term "transcendent, unobservable material thing" turns out after all to be simply the name of some actual and possible sense-data; it does not follow, that is, that this term *denotes* a collection of sense-data. To assert that there are transcendent things is to make an empirical statement (i.e., a statement which is theoretically verifiable by occurrences of sense-data) which might, so far as semantic analysis goes, be either true or false. If it should turn out to be true, then we should have proved that there are entities other than sense-data, and that hence phenomenalism is false. I myself think that this statement is true. But all I have argued in this paper is that material-thing words *may* denote entities other than sense-data, and that therefore material things *may not* be simply classes of sense-data, and that consequently the relation between sense-data and material things may not be one of class membership; and that the semantic argument fails to show that any of these possibilities are incompatible with the verifiability theory.

In the course of my paper I have argued that what is meant by the phenomenalist's assertion that material things *are* classes of sense-data is that material-thing words denote classes of sense-data. Now I am quite aware that many, perhaps most, contemporary phenomenalists have repudiated this latter view. They have repudiated it because, under criticism, it proved to be quite untenable. What it amounts to is the assertion that material-thing words are *synonymous with* the names of groups of sense-data, and are therefore simply substitutable for them in any sentence. It amounts, roughly, that is, to the assertion that whatever can be truly predicated of a material thing can be truly predicated of a group of sense-data, and vice versa. And this commits one to such views as that if a chair collapsed then a string of sense-data collapsed; that if a motor car moved down the street, then a group of sense-data—which, incidentally, are generally believed by phenomenalists to be dependent on certain events inside our heads—that this group of sense-data moved down the street; and, in general, to all those absurdities which occur in Russell's phenomenalistic constructions of the world and which Lovejoy was able to have so much fun with in *The Revolt Against Dualism*. It commits one, for instance, to the view that Russell's head, since it is a material thing, is both hollow and spread out over a very large area of space.

A "new" phenomenalist seeks (successfully, in my opinion) to avoid these absurdities by rejecting the view that material-thing words denote classes of sense-data and are therefore simply substitutable for the names of those classes. This he does by affirming that, strictly speaking, material-thing words do not, in isolation, denote anything. In isolation, material-thing words are, he holds, meaningless. The sentences in which they occur are meaningful—in the sense that they assert something about actual and possible sense-data—but the words themselves are not meaningful.

Does the fact that a "new" phenomenalist would not admit my formulation of phenomenalism (as the view that material-thing words denote collections of sense-data) mean that my argument has been an argument against a straw man? I think not. What the "new" phenomenalism substitutes for the older view that material-thing words denote classes of sense-data is a view which is summed up in Duncan-Jones's formula that "to say something about a material thing is to say something, but not the same thing about classes of sense-data." (The position is more usually stated as the view that, although material-thing *words* are not synonymous with the names of groups of sense-data, any material-thing *sentence* is, none the less, translatable into a long sense-datum sentence.) According to this "new" view, then, material-thing words are *not* synonymous with the names of classes of sense-data. What the "new" phenomenalism asserts is rather—what?

So far as I can see, it asserts simply that material-thing sentences are about sense-data. The formula above, which is accepted by all of the "new" phenomenalists, is equivalent, so far as I can see, to the statement "to assert a material-thing sentence is to say something about sense-data." But *this*, as we have seen, is simply the verifiability theory itself; it is simply an assertion that material-thing sentences are empirically meaningful.

If this were all that the "new" phenomenalists claimed, then I should have no quarrel with them except to note that they are using the term "phenomenalism" in a most unusual sense. For, as I have shown, it would be quite consistent with phenomenalism, in this new sense, that there should be transcendent, unobservable material things; whereas it was precisely the denial of this that was the essential tenet of the "older" phenomenalism.

But actually, all of the "new" phenomenalists with whom I am acquainted allow themselves in the end to be overcome by the older associations of the term "phenomenalism," and end up believing that, by the semantic argument, they have somehow proved that only sense-data exist, or at least that only sense-data can be meaningfully asserted to exist. Allow me one example of this. On page

229 of *The Foundations of Empirical Knowledge*,[3] Ayer recognizes that the existence of transcendent material things is quite compatible with what he means by "phenomenalism"—namely, that all material-thing sentences say something about sense-data. He says: "There is, indeed, a sense in which it is correct to say that . . . material things exist, inasmuch as sentences that are used to describe . . . material things . . . very frequently express true propositions."

But on the very same page he is overcome by the old associations of the term "phenomenalism," and proceeds to take it all back by stating: "it would not be correct to infer from this that there really were . . . material things. . . ."

I can not seriously believe that there is a valid distinction to be made between a thing's existing and its *really* existing.

ASHER MOORE

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MATHEMATICS AND THE FOLKWAYS

IF there is any aspect of our culture which one might suppose would lie outside the folkways, grounded in a reality independent of cultural processes, it is mathematics—the Queen of the Sciences. Alas, she has been toppled from her lonely throne! Dr. Leslie Alvin White, professor of anthropology at the University of Michigan, is responsible for this bold deed. In a chapter called "The Locus of Mathematical Reality," in his recent book *The Science of Culture*,[1] he banishes her to the region of the folkways to join company with other distinguished exiles from the realms of Truth, Beauty, and Goodness. Because Professor White's chapter carries to an ultimate extreme the approach which in anthropology is called "cultural relativism," marking the conquest of the last outpost of values which were thought to be in contact with a universal, non-social reality, it seems worth while to make a close inspection of the author's arguments.

Professor White opens the chapter with a quotation from *Through the Looking Glass*. It is the section in which Alice is told she is merely a figment of the Red King's dream. The passage is appropriate because the chapter defends a view which leads ultimately, as the author himself apparently realized, to a curious kind of collective solipsism.

[3] New York: The Macmillan Company.

[1] New York: Farrar, Straus and Company, 1949. This chapter previously appeared as an article in *Philosophy of Science*, Vol. 14 (1947), pp. 289–303.

Of course Professor White does not put it in those terms. He is concerned only with what he calls "mathematical reality." The laws of mathematics, he writes, are "wholly dependent upon the mind of the species." "Mathematics in its entirety, its 'truths' and its 'realities,' is a part of human culture, nothing more." "The locus of mathematical reality is cultural tradition." "Mathematical concepts are independent of the individual mind but lie wholly within the mind of the species, i.e., culture." "Its [mathematical] reality is cultural: the sort of reality possessed by a code of etiquette, traffic regulations, the rules of baseball, the English language or rules of grammar."

One final quotation: "It is now clear that concepts such as space, straight line, plane, etc., are no more necessary and inevitable as a consequence of the structure of the external world than are the concepts green and yellow—or the relationship term with which you designate your mother's brother, for that matter."

Let us take a more careful look at that last statement. The *term* by which a society designates the kinship of uncle-nephew is, of course, purely cultural. But the relationship itself, the *denotatum* of the sign, is clearly an aspect of the external world which would exist whether anyone gave a term to it or not. Dinosaurs had uncles and nephews long before a species evolved capable of describing the relationship in language symbols.

Similarly with colors. The *term* "green" is obviously a cultural reality. The *sensation* of green is a psychological reality. But the sensation and the symbol are both grounded in an external state of affairs that causes all wave lengths of light to be absorbed by an object except the green which is reflected to the eye of the observer.

When Professor White suggests that colors are not features of the external world he certainly does not mean anything so trivial as that color *sensations* are in the mind. His chapter makes quite clear that he wishes to deny any necessary causal connection between the sensations and outside reality. Colors are not "a consequence of the structure of the external world." You might think so, he adds, until you learn that Creek and Natchez Indians did not distinguish yellow from green, but had a common term for both.

This is an astonishing *non sequitur*. The fact that these Indian tribes used the same word for what we call yellow and green does not mean that a tribesman could not distinguish between green and yellow objects otherwise identical. If someone had shown him a green and a yellow string of beads, pointed to the green saying, "This is yours," then mixed them and asked him to pick out "his," there is no reason for thinking he would have experienced any diffi-

culty. Does Professor White mean to imply that the Creek and Natchez Indians had a culturally conditioned yellow-green color blindness?

One is reminded of the famous controversy over Homer's color sense, provoked by the British statesman William Gladstone. In 1858 Gladstone wrote a book on Homer which suggested that the Greek poet was color blind because of his meager use of color words. In 1870 a German group of evolutionary ethnologists argued that the entire Greek population of Homer's day was color blind, and that ability to discriminate colors did not develop until a culture reached advanced levels of complexity. The first important attack on this view was Grant Allen's *The Colour Sense: Its Origin and Development,* 1879. Allen called attention to the fact that a single term for green and blue is common among primitive societies, but he pointed out that the Highland Scots, who did not verbally distinguish green and blue, were able to discriminate perfectly between the two colors when they were tested for this ability. There was no word for "orange" in the Anglo-Saxon of Chaucer's time, and one might suppose Chaucer unaware of this dubious color had he not referred twice in the *Canterbury Tales* to a shade "bitwixe yelow and reed." Since 1900 the theory that a deficiency of color terms in a language indicates a deficiency in color discrimination has been increasingly discredited, especially by the investigations of the Spanish anthropologist José Perez de Barradas, published in the 'thirties.

No one questions, of course, that the precise areas of the spectrum signified by color words will vary widely from culture to culture depending on the society's needs. A primitive tribe may demand only a few color words, whereas a modern factory producing women's dresses may require terms for several hundred different shades. Members of a tribe who did not distinguish green from yellow might have an understandable tendency to confuse these colors, just as it is easy for us to confuse shades of brown, but this does not mean that the tribesmen can not see the difference between green and yellow. The basic issue, of course, is whether the process of color vision is culturally determined, as Professor White implies, or whether it is determined by an external structure ordered in such manner that it sends certain wave lengths to the retina which result in certain color sensations in the brain.

Precisely the same issue is involved in regard to "mathematical reality." We do not have to plunge here into the highly technical controversies over the exact meaning of "reality" which divide such philosophers as Carnap, Russell, and Dewey, because the vital point is much simpler. There has been no philosopher of eminence, in-

cluding the logical empiricists, who has argued that the so-called external world was nothing more than a projection of human minds. Even idealists like Berkeley, who insisted that nothing could exist except as perceived, were quick to restore external reality by making the world a projection of God's mind. Berkeley's stones are just as external and kickable as the stones of a materialist. All we need grant, for purposes of this elementary discussion, is the existence of a world outside of human minds which has a structure that is ordered.[2] We need not concern ourselves with the metaphysical questions of how or why it exists, or exactly how and why it is ordered. It will suffice if we are willing to abandon solipsism, both of the individual and the group, and confess belief in an outside reality that is more than a vast, nondescript fog in which such features as, say, spiral nebulae, are merely projections of our interests, involving no pattern of parts other than the patterns we infuse into them by our attention.

And what are the consequences of affirming an external order? It follows that mathematical concepts, like colors and family linkages, have at least one foothold in a reality independent of the human species. It is true, of course, that an abstract triangle does not exist in the same sense a cow does, but this does not mean that the concept of triangle is an arbitrary cultural feature unconnected with the structure of the world. Professor White himself admits this connection at the close of his chapter when he discusses briefly the question of how mathematical concepts first arose. They were produced, he says, in the "nervous systems" of our ape-like ancestors, and he reminds us that apes "have a fine appreciation of geometric forms." This is a startling admission, because clearly if an ape appreciates geometric forms, there must be geometric forms outside of human culture for him to appreciate. This is only another way of saying that if all men vanished, there would still be a sense (exactly *what* sense is another and more difficult problem) in which spiral nebulae could be said to spiral, and hexagonal ice crystals to be hexagonal, even though no human creatures were

[2] When I say the external world "exists" I mean nothing more than the simple, common-sense recognition of an ordered set of relations independent of human minds, which is somehow structurally similar to our subjective mathematical relations. It may be that this belief is merely a matter of convenience (i.e., it is simpler to assume it than to try to describe events in terms of shifting sense impressions); but in any case, the controversy among empiricists over whether "realism" can be affirmed (as Russell and Reichenbach believe) or whether such an affirmation is meaningless (as Carnap and possibly Dewey think) is on a level irrelevant to the issue here under discussion. Even the most extreme anti-realists among the logical positivists would be appalled by the suggestion that logical and mathematical laws were culturally variable.

around to give these forms a name. The only alternative to this view is to insist that all the order we perceive in the universe whether it be the static geometrical order of structure or the dynamic order of natural laws, is but a projection of our minds upon empty space or, at the most, on a kind of patternless plenum.[3]

And yet the modern ethnologist, with his allergy toward absolutes, is constantly haunted by forms of subjective idealism. I recall an evening at the University of Chicago a few years ago when I tried for hours, totally without success, to persuade a group of anthropology graduate students that two plus two were four in all cultures. It sounded to them suspiciously like a "cultural universal" which might trap them into a value judgment. In the course of the discussion, however, two important misconceptions about mathematics came to light, and since both are to be found in Professor White's chapter, it might be instructive to mention them here.

First, there is the notion that variations in counting systems somehow mean variations in mathematical laws. People inherit from their culture methods of counting and calculating, Professor White explains, just as they inherit ways of cooking and marrying. "Had Newton been reared in Hottentot culture he would have calculated like a Hottentot." The author's choice of Hottentot was unfortunate because Hottentots have a decimal system and therefore calculate the same way Newton did, but even if Professor White had chosen, say, the African bushmen who use a binary system, the illustration would still have been utterly valueless for his purposes. Counting and calculation in the binary system make use of exactly the same mathematical laws as any other system. In fact most of the giant electronic calculators operate on a binary system because it adapts easily to electronic relays, but this does not imply that the machine is based on a different kind of mathematical reality. Variations in number systems are, in fact, nothing more than variations in methods of symbolization. Whatever is done in the signs of one system can be translated exactly into all the others. Any number can provide a base for counting, though in most cultures the base has been five, ten, or twenty in correspondence with the groupings of fingers and toes. (One of the curiosities of ethnology is the quaternary system of the Yuki Indians in California. They counted on the *spaces* between fingers.) The base number chosen will play a rôle in determining the sounds used for

[3] This was Kant's view, and even William James, in unguarded moments, defended it. (See James's footnote on page 428 of the Modern Library edition of *Varieties of Religious Experience*.) For a brief, clear exposition of the weakness of Kant's subjective mathematics, see Russell's *A History of Western Philosophy*, 1945, pp. 712 f.

higher numbers, or the way they are depicted in writing, but this no more changes the underlying mathematical laws than the number designated by "17" changes its properties when it is symbolized by Roman numerals or in the Mayan vigesimal system by two dots above three horizontal lines.

To make this very clear, let us consider for a moment the meaning of "two plus two are four." In everyday experience we find that objects often are grouped as couples. To all classes of couples let us give the generic name of "Bing." We further observe another type of configuration of units which in our culture is designated by the word "four." To this grouping we will give the name "Bong." A little experimentation with groups of bings soon establishes an astonishing law. Whenever we add one bing to another bing, producing so to speak "bing bings," the new configuration invariably belongs to the class we have designated "bong." Thus we arrive at a simple arithmetical law, "Bing plus bing are bong." This is what is meant by "two plus two are four."

I am aware of the fact that if two drops of water are added to two drops, the result may be one large drop. But in so far as the units remain units, the law is universal and invariable. If a tribesman breaks each of two sticks in half he will find he has four sticks. If he extends two fingers of one hand, then two more, he would be surprised indeed to discover, exclusive of his thumb, five fingers.

John Stuart Mill, in an effort to establish logic and mathematics on an empirical basis, imagined a mischievous demon who went about creating fifth objects whenever two things were brought together with two other things. If this were the case, Mill reasoned, our arithmetic books would tell us that two plus two equaled five. Most contemporary empiricists agree that experience provides the psychological origin for our knowledge of mathematical laws, but they prefer to give the laws an absolute validity of their own—analytic, formal, and *a priori*.[4] We need not concern ourselves, however, with the controversy between those who defend Mill's view, and those who, like Carnap and Russell, regard the laws as true of all possible worlds, because in neither case are the laws subject to cultural variation. The spoken and written signs by which

[4] The demon's activity can, in fact, easily be shown to be self-contradictory and therefore meaningless, like the statement, "Some odd numbers are even." For example, if we bring together two horses, two pigs, and two chipmunks, we have various combinations possible of two plus two. If we consider two horses and two pigs, then the fifth animal, created by the demon, must be either a horse or pig. Let us assume it is a horse. The grouping of two pigs and two chipmunks necessitates, say, a third chipmunk. But now we are unable to obtain five from the addition of two horses and two chipmunks because we already have three of each.

a culture symbolizes mathematical reality are, of course, culturally determined, though one method of symbolization may be more efficient than another. Robert Lowie, in his *Introduction to Cultural Anthropology,* does not hesitate to describe the Roman system as "cumbersome" in comparison with the Mayan, which introduced the valuable zero symbol.

It is important to realize also that the process of addition does not require the witness of a human being. It operates just as effectively when no one is looking. If you drop two pennies in a child's empty bank, then two more pennies, you will discover, on opening the bank, that it contains four pennies. The entire operation could, in fact, be performed mechanically and recorded on film.

The view that mathematics is grounded only in the cultural process slides easily into the "collective solipsism" which George Orwell satirizes in his novel *Nineteen Eighty-Four.* For if mathematics is in the folkways, and the folkways can be molded by a political party, then it follows that the party can proclaim mathematical laws. "Reality exists in the human mind," declares O'Brien, member of the Inner Party, "and nowhere else. Not in the individual mind, which can make mistakes, and in any case soon perishes; only in the mind of the Party, which is collective and immortal. Whatever the Party holds to be truth *is* truth." One of the more agonizing episodes in the novel is the scene in which the protagonist is tortured into the conviction that two plus two are sometimes five.

A second common source of confusion concerning these topics is the fact that recent work in mathematics, stimulated by the relativity revolution in physics, seems to deny an absolute validity to familiar Euclidean laws. For centuries, Professor White points out, it was thought that Euclid's theorems were necessary, but "the invention of non-Euclidean geometries . . . has dispelled this view entirely."

Now there is a sense in which this is entirely correct; but it is a sense wholly foreign to Professor White's purposes. It is true there is no *a priori* reason why a geometrical postulate, such as the famous parallel postulate, must be true. A coherent non-Euclidean system can be constructed which will violate this postulate, and the discoveries of modern physics suggest that such a system is a sounder basis on which to make calculations involving high speeds and astronomical distances. But on the level of ordinary speeds and distances, we live very much in an old-fashioned, prosaic, Euclidean world which does not vary in any *measurable* respect from one geographical area to another. If a tribesman wishes to shoot a bird with a bow and arrow, it is necessary for him, whatever his

tribal affiliation, to aim the arrow at the bird in strict accord with Euclidean and Newtonian laws and not, say, to shoot the arrow in the opposite direction on the grounds that straight lines, prolonged indefinitely in a closed fourth-dimensional continuum, will circle the cosmos and return to the starting point.

A moment's reflection and one will realize that any imaginable society, to exist at all, must constantly make use of elementary mathematical laws which are everywhere the same, but so commonplace we are seldom aware of them. For example, to exist it is necessary to eat, and to eat it is necessary that something be placed in the mouth. But the fact that a smaller object can be pushed through a larger orifice is a fact of geometry. A tribe which acted on the reverse assumption, i.e., that only larger objects could be placed through smaller holes, would be acting on a law which, however well grounded it might be in the mythology of the culture, would be so poorly grounded in mathematical reality that the tribe would quickly die of starvation.

Of course no native group has ever adopted a belief that stupid, and in fact ethnological research of recent decades has disclosed members of primitive societies to be not nearly as unlearned in mathematics as earlier anthropologists had supposed. At one time it was assumed that if a tribe had no words for numbers beyond two or three, members were incapable of counting beyond two or three. Early investigators, however, were puzzled by the uncanny ability of these natives to survey a herd of fifty sheep and immediately know when one was missing. It was supposed that the native had a phenomenal memory in which he retained the entire herd gestalt; or perhaps he knew each sheep personally and recalled the face. But later investigation soon made clear that these natives had elaborate means of counting in which they made use of various parts of their anatomy in a predetermined order. For example, they counted their fingers, wrists, elbows, armpits, nipples, navel, knees, and toes. The counting would be done mentally, then instead of remembering a word for 27, the native would simply recall that he stopped counting on, say, his left big toe.

Lévy-Bruhl's books on primitive mentality made clear that the savage was much shrewder than the aboriginal idiots described by Spencer in his *Principles of Sociology*. But even Lévy-Bruhl is now regarded as having greatly exaggerated the extent to which savage "pre-logical" thought differs from our own. There is perhaps a more thorough mixing of reality with the religious projective system, but when it comes to solving practical problems within terms of their own culture, they do as well, if not better, than we do. And they are successful precisely because they make use of laws of

logic and mathematics which have their loci, not in the culture, but in external reality. The laws are discovered, not created, just as the laws of the lever or wheel are discovered; and there is no reason why an anthropologist should be ashamed to admit this fact.

In fairness to Professor White I should say at this point that I do not doubt for a moment that he believes in an external world, of orderly structure; and that this order plays a necessary rôle in determining the ways in which cultures formulate mathematical and physical laws. His article contains a great deal of ambiguity, and I suppose it would be possible to twist and force his statements to mean nothing more than that the *cultural* aspect of mathematics is cultural. But this is like saying that all aspects of reality within this room are inside this room, and I have accordingly paid Professor White the compliment of assuming his words to mean something less trivial—to convey what he obviously believes to be a new and revolutionary approach to his topic. I have tried to show that this approach leads to an idealism which Professor White would be the first, I am sure, to disavow.

Since 1900 cultural anthropologists have been in a phase of reaction against the naïve ethnocentrism of their Victorian predecessors. One by one various aspects of culture—art, philosophy, religion, ethics—have fallen into the category of the folkways. Karl Mannheim's "sociology of knowledge" subjected all ideas, including those of science, to sociological investigation. But even Mannheim did not dream of maintaining that the laws of mathematics, or even the knowledge obtained by science, were culturally determined. "Relating individual ideas to the total structure of a given historico-social subject," he wrote in his famous *Ideology and Utopia*, "should not be confused with a philosophical relativism which denies the validity of any standards and of the existence of order in the world" (p. 254). On page 263 he explicitly cites the law of "two times two equals four" as an example of the sort of truth *not* subject to cultural determination. Even in the social sciences Mannheim believed objective knowledge to be possible. In fact the chief end of the sociology of knowledge, as he saw it, was to "unmask" the unconscious compulsions behind conflicting points of view and so enable the social scientist to arrive at a perspective which would be the most objective possible, and therefore the nearest to reality. Two quotations from *Ideology and Utopia* will suffice:

> No one denies the possibility of empirical research nor does anyone maintain that facts do not exist (nothing seems more incorrect to us than an illusionist theory of knowledge). [P. 91.]

> It is, of course, true that in the social sciences, as elsewhere, the ultimate criterion of truth or falsity is to be found in the investigation of the object, and the sociology of knowledge is no substitute for this. [P. 4.]

In Mannheim's view the student of the sociology of knowledge is like a man moving among a group of artists who surround a nude model (reality), each painting her from his own perspective. The man studies every canvas, comparing it with what he sees from each artist's perspective, and in this manner tries to arrive at an accurate understanding of the model's shape. The notion that because each artist paints her differently, therefore her anatomy has no definite shape, would have struck Mannheim as a completely indefensible form of subjective idealism. And I need not add that "shape" is geometrical.

Among contemporary anthropologists signs of a long-needed rebellion against extreme cultural relativism are increasingly evident. The work of such men as Kardiner and Linton (Professor White does not mention Kardiner in his 650-page survey of "culturology," and he cites Linton only to disagree with him) is beginning to suggest dimly a basis for setting up standards of mental health which may someday provide a rough yardstick for measuring the degree to which a culture satisfies the basic needs of its members. It is regrettable that Professor White, out of sheer inertia, should let the older trend propel him through the looking glass into a realm of dream and nonsense.

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BOOK REVIEW

The Limits of Science. Outline of Logic and of the Methodology of the Exact Sciences. LEON CHWISTEK. Translated from the Polish by Helene C. Brodie and Arthur Coleman. Introduction and Appendix by Helen Charlotte Brodie. (International Library of Psychology, Philosophy and Scientific Method.) New York: Harcourt, Brace and Company. 1948. lvii + 347 pp. $6.50.

In recent years, there have been a number of philosophical systems that have attempted to "reconstruct" the world, or some aspects of the world, in terms of the elements of logic and the elements of experience. These attempts, though varying widely in their methods and motivations, are usually characterized as *logical empiricism*. Logical empiricism is then distinguishable from logical positivism, the latter being a particular form of the logico-empirical

reconstruction that emanated chiefly from the Vienna circle of the the 1920's and 1930's. Chwistek's *Limits of Science* is another example of logical empiricism and is typical of the important Polish developments that occurred before the last war and were, in large part, abruptly terminated by the war.

Strangely enough, most of the differences that occur among logical empiricists arise in disputes as to what kind of logic is admissible in the reconstruction. The correlative problem of the nature of elementary experience, though not altogether neglected, has received far less attention. The "purists" in logical empiricism have insisted on a type of nominalism; they have argued for a parsimony in logic, on the grounds that assertions of the existence of classes, higher infinites, and certain types of relations actually bring back into logical empiricism the metaphysical assumptions it attempts to eliminate.

Chwistek belongs to the purist group and his *Limits of Science* represents one of the best expositions of this type of logical empiricism. Miss Brodie is to be congratulated on having made the work available to English readers. A good part of the volume is devoted to Chwistek's formal logic and readers interested primarily in this aspect will profit not only from Miss Brodie's account in the Appendix, but also from a review by J. R. Myhill.[1]

The remainder of the book consists of general discussions which fill in the background of Chwistek's position. As is common in the writings of logical empiricists, the exposition is most often obscure when the issues involved are critical, and clear when the issues are trivial. But the book itself does present an admirable picture of a nominalist mind at work.

Kant had asked, "What kind of a logic must one have in order to understand the world?" Chwistek reverses the question: "What kind of world must one have to understand logic (or, actually, classical mathematics)?" He sets himself "the task of rebuilding the foundations of mathematics and removing its metaphysical suppositions" (p. 25). This task is to be accomplished by means of *sound reason*, which means "the method for attaining truths which are not subject to intellectual revolution" (p. 25). Chwistek feels that such truths certainly exist, but they are trivial. And yet out of these "banal and primitive" truths it is possible, he thinks, to perform the construction not only of mathematics but the whole of our conceptual apparatus. Indeed, Chwistek appears to be far more optimistic than many other logical empiricists concerning the extent of eventual success of his program. A science based on sound

[1] *Journal of Symbolic Logic*, Vol. 14 (1949), pp. 119–125. Brodie and Myhill appear to disagree on important points in their accounts.

reason will not fall into error; it will be the safeguard against irrational tendencies like fascism.

> History teaches that ultimate victory has always been the destiny of societies who employ the principles of exact reasoning. Exact analysis depraves only weak and inept individuals who find it too difficult for them. It should not be feared by young and healthy societies. They will always find strength to act upon thoughts which were obtained over a period of years by means of exact analysis and to work out a well rounded fruitful life on the basis of these thoughts. [P. 23.]

Chwistek relies on a theory of ostensive defining as the basis of his system. For example, natural descriptions, photographs, and the like, are not sufficient to show the specific difference of a canary; "ultimately it is necessary to point to a living model" (p. 36). Again

> Probably nothing can make an idealist abandon his belief in the existence of ideal objects, but without question in practice only words and the automatic reactions evoked by these words are involved. . . . These facts can be confirmed experimentally and consequently are indubitable. They constitute a foundation sufficient for constructing a theory of knowledge based on sound reason. [P. 43.]

Out of this viewpoint emerges a more or less clear-cut personality portrait. Chwistek is parsimonious in what he is willing to grant; for him we put into the bank of man's wisdom only what we have come by in the hardest way: the simplest elements. And, like any puritan, Chwistek paints no rosy world-picture: "I can not hide that the labour involved is very great and its possible results may be very small" (p. 292).

Again, Chwistek has a simple and unquestioned faith in empirical science. He admits that one experiment may not prove conclusive, because of "local conditions" that are difficult to observe. But if this effect is obtained elsewhere, "the matter is definitely settled and no one would doubt that it is possible to obtain the given effect whenever it is desired" (p. 264). One is constantly amazed at Chwistek's bland assertions of this type, as though no real and critical problems arise in connection with repetitive confirmation in laboratory work.

Chwistek's faith in the existence of simple beginning points in the reconstruction of science, together with his parsimony with respect to assumptions, places him at one end of the scale of philosophical thinkers. This point of view is well stated by Nelson Goodman:

> The most common kind of complaint against modern logic is that it fails to provide a ready answer to whatever troublesome problem happens to arise. If we find it difficult to explain the meaning of counterfactual conditionals, some-

one is sure to suggest that we just slip into our logic a new so-called "logical" sign for the kind of sentential connection we need. Obviously this gets us nowhere. This is one reason why some of us take a puritanical attitude towards our logical apparatus, and refuse to admit such notions as intensional implication and the modalities.[2]

Thinkers at the other extreme of the scale from Chwistek are those who do admit into their system whatever seems essential at any moment. They enjoy the freedom that comes with broad viewpoints, gestalt world-views, and the like. Much of the present dispute in philosophical journals no doubt arises because of personality differences with respect to parsimony.

The critical point does not seem to be one of judging the merits of nominalism on its own grounds. There is certainly nothing sacred about parsimony—whether it occurs in spending money or making assumptions. But there is a critical question of the advantages of a nominalistic position for science today. The difficulties in answering this question lie in the fact that contemporary nominalism is actually very ill-defined. Few of us know exactly what the nominalist thinks is admissible; his "elements" or "individuals" have not, to the reviewer's knowledge, ever been characterized clearly. We don't know what he takes to be a system of "sound reason," except by way of enumeration. We can certainly see what Chwistek, or Goodman, or Quine are willing to put into their logical framework, but we still can not see why just these elements are to be chosen. On the empirical side, the elements are even more obscure. About all that is apparent in the nominalist attitude is a strong desire to avoid postulating infinite aggregates, modalities, intensional meanings, and the like.

But the attitudinal spirit of nominalism is apparent enough. It consists in putting into our science only those entities which to an "unclouded" intuition clearly exist. It takes certain problems to be "fundamental" and insists that these problems must be solved adequately before one can turn attention to other and perhaps more critical aspects of science. It has a very rigid idea of what "science" is, and completely ignores any attempts to conceive of science in terms other than nominalist ones. Nominalism's chief function in science is a restraining one: it discourages the introduction of new concepts, new frames of reference, new methodologies. It looks askance at those who claim a science of ethics, or even a science of mind or society, until such time as the entities supposedly studied by these fields are "clearly" shown to exist. It even discourages free flights of fancy among the mathematicians, and demands that

[2] P. 624. "Some Reflections on the Theory of Systems," *Philosophy and Phenomenological Research*, Vol. IX (1949), pp. 620–625.

they restrict their formal constructs to signs of "clearly" existent entities. Yet nominalism is plagued by the very spirit it attempts to disavow: it assumes the existence of an intuitively given criterion of what clearly exists. Its own explanations of existence are hopelessly inadequate and obscure. Its metaphysical foundations are rarely defended, and indeed are indefensible on nominalist grounds.

More important, nominalism represents the conservatism of the present age. Our science is trying to break through the bounds of formalism and physicalism. It does no good to throw out metaphysical foundations on the basis of principles that are themselves metaphysical and obscure. What is needed is a philosophy of science in which there are no fundamentals. We are coming to realize that concepts like sound reason, direct observation, and the like, are ill-defined, obscure, misleading. We do need sound principles of conservatism, even if we adhere to revolutionary tenets in scientific method, and in this respect nominalism serves the important function of calling our attention to this critical problem of conservation. But there is no more reason in philosophy than there is in society for letting the principles of conservation stand as the sole foundation of our thinking.

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BOOK NOTES

The History of Nature. C. F. VON WEIZSÄCKER. Translated from the German (*Die Geschichte der Natur*) by Frederick T. Wieck. Chicago: University of Chicago Press. 1949. vi + 191 pp. $3.00.

C. F. von Weizsäcker combines in a remarkable degree scientific ability with philosophical penetration. His aim in *The History of Nature* is to point the way towards a synthetic world-view which will compensate for the specialization of perspective inherent in the very nature of the scientific enterprise. This synthesis requires a recognition on the one hand that man is a product of nature and subject to her laws and on the other hand that science is made by man and for man and therefore subject to his intellectual and material conditions. The scheme which Weizsäcker employs he calls "thinking in the circle of mutual dependence of subject and object"; he seeks to restore the original unity of man and nature which has been destroyed by the opposition of subject and object.

Nature can only be understood in terms of an adequate theory of *time*. The past is unalterable fact; the future involves possi-

bility. Nature has a *historical* character, which is expressed in the Second Law of Thermodynamics and in the evolution of differentiated forms, both of which principles depend on this distinction between past and future.

Never losing sight of his basic philosophic aim, Weizsäcker presents some current scientific conclusions regarding the nature and extent of space and time, the origin and development of star systems, stars, the earth, life, soul, and man. In connection with current views of finite space and time he discusses the concept of infinity, describing its history, showing its mythological character in modern physical science, and indicating a religious solution to the nihilism implied in the destruction of that myth by a thorough-going scientific pragmatism. Other fundamental questions such as the vitalist-mechanist controversy, the relation of body and soul, and the nature of freedom are cogently treated. The book concludes with an analysis of the religious problem, in which the author shows a profound insight into both the tragic character of existence and the meaning of faith which can overcome the tragedy.

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Man as Man: The Science and Art of Ethics. THOMAS J. HIGGINS, S. J. Milwaukee: Bruce Publishing Company. 1949. xii + 607 pp. $3.75.

In a total of 1,128 numbered paragraphs setting forth some 80 theses and their corollaries, this treatise provides a complete compendium of approved Roman Catholic teachings with respect to moral conduct. At all points its appeal to the supernatural is explicit, and it has only pity for those "philosophers who must waive the help of revelation." Most of the positions taken are familiar Thomistic-Aristotelian ones. Of current controversial interest, however, are such declarations as: "Society must be unsecularized. . . . Governments themselves cannot be without religion nor can they be indifferent to the individual's efforts to attain eternal beatitude. They must realign their mighty powers to assist the over-all purpose of life. They must be re-baptized and accept again the Gospel of Jesus Christ" (p. 297). It would be hard to find a clearer affirmation of the intent to destroy the separation of Church and State. Not only do "parents alone have the right to impart" education, but the State should supply schools only when private families are unable to do so. "Where privately conducted schools are sufficient and function effectively, public schools are not needed and should not be built" (p. 514). The State, acting as censor, "may and ought to suppress . . . writings

and teachings counter to the Natural Law." This involves no denial of academic freedom, since "the object of freedom may only be the true and the good" (pp. 516–517). As to the form of the State, "the Natural Law neither commands nor forbids monarchy, aristocracy, or democracy but allows any form of government which is capable of attaining the ends of the State." This is because "there are no natural signs indicating nature's intent" (pp. 469, 470). The sections on marriage are completely dominated by the notion of maximum childbearing; and the full fury of a celibate priesthood is unleashed upon birth control: "hideous crime," "foul perversion," "If that is not evil, nothing is evil" (pp. 409, 410). The author condemns atomic bombing of a wide area considered "merely as an act of total war, as the body blow of one global giant against another. . . . Nor may the action be justified on the ground of bringing war to a speedy end" (p. 571). An appendix entitled "Occupational Groups" offers corporations "spontaneously organized, semipublic, autonomous societies, intermediate between the family and the State, composed of absolutely all who engage in the same type of labor, trade, or profession . . . "as the cure for "the root evil of business," that "its total motive is gain" (p. 587).

H. A. L.

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THE PERSONALIST. Thirty-First Year, Winter, 1950. Philosophies and Psychologies: *Herbert Sanborn.* (Spring, 1950.) James and Value Problems: *J. K. McCreary.* Perception in Hegel's Aesthetics: *G. E. Mueller.*

THE HUMANIST. Autumn, 1949. Social Planning in a Democracy: *J. L. Blau.* Moral Experience and Ethical Science: *V. S. Yarros.* (1950, Number One.) Existentialism: Irrational, Cynical, Nihilistic: *Van Meter Ames.* Aspiration without Nonsense: *H. A. Larrabee.*

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NOTES AND NEWS

The result of the vote by mail of the members of the Eastern Division of the American Philosophical Association on the following Resolution presented at the Business Meeting of the Division at Clark University, December, 1949, is given below:

I. WHEREAS the democratic operation of our Association entails equality of treatment for all members, which is not provided by meetings at places where there is racial segregation;
BE IT RESOLVED THAT meetings of the Eastern Division of the American Philosophical Association not be held at colleges or universities where it is impossible to provide non-segregated accommodations.

Endorsed 355 to 27.

II. WHEREAS it is the professional responsibility of philosophy teachers to seek and teach the truth; and
WHEREAS there has been increasing pressure in many areas against minority or dissenting opinion; and
WHEREAS this pressure operates in institutions of higher education to prevent free inquiry into unpopular opinions and to use of the criterion of conformity in judging teachers; and
WHEREAS the development of uniformity of thought enforced by legal or economic penalties or intimidation would make it impossible for philosophers to fulfill their professional duties;
BE IT RESOLVED THAT the Eastern Division of the American Philosophical Association reaffirm the professional duty and the right of philosophers to examine and express their independent evaluation of any form of philosophical thought whatsoever, no matter what the bearings of that philosophy on controversial issues of social policy.

Endorsed 372 to 9.

III. WHEREAS there have been widespread attacks upon the freedom of teachers to exercise their civil rights, as evidenced in

dismissals, loyalty oaths, special legislation for inquiries into teachers, vilification of individuals in newspapers and magazines;
BE IT RESOLVED THAT the Executive Committee of the Eastern Division set up a committee of three on Academic Freedom, empowered and directed to receive complaints of infringement of academic freedom of members of the Association or of their dismissal or discrimination against them on the grounds of the exercise of their civil rights; to cooperate with investigations by other responsible bodies; to assist in the attempt to right any injustice by resolution, publicity, and participation in legal action amicus curiae.

Not endorsed, 137 to 229.

IV. WHEREAS the Pacific Division of the American Philosophical Association by *unanimous* vote adopted the following resolution and instructed its secretary to transmit it to President Raymond B. Allen of the University of Washington: "That the members of the Pacific Division of the American Philosophical Association express their confidence in the integrity, as man and teacher, of Professor Herbert J. Phillips of the Department of Philosophy of the University of Washington, and affirm their strong conviction that membership, or non-membership, in a legal political party is not itself sufficient grounds for determining fitness for academic employment." (Proceedings of the American Philosophical Association, 1948–49, pp. 477–78.)
BE IT RESOLVED THAT the Eastern Division of the American Philosophical Association endorses the principle embodied in the resolution of the Pacific Division that an individual teacher be judged in terms of his own actions and not in terms of the action of others.
BE IT FURTHER RESOLVED THAT the Eastern Division of the American Philosophical Association call upon the University of Washington to reconsider its decision in the case of Professor Phillips in the light of this principle and of the expressed judgment of those of his professional colleagues best qualified to pass on his professional integrity.

Endorsed 297 to 71.

The program of the first meeting of the Metaphysical Society of America, which will be held at Yale University, New Haven, Connecticut, on April 15, 1950, is as follows: 10:30 A.M.—"Being and the Metaphysicians" by Gerald Phelan; "Perception, Recollection, and Death" by Arnold Metzger; Organizational Business Meeting; 2:00 P.M.—"Metaphysics and the Quest for Clarity" by G. Watts Cunningham; "Voluntaristic Elements in Logic and Ethics" by Karl Menger; "The Structure of Individuality" by John E. Smith.

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